A&R

Work Order ID 109285

November-18-13 3:05:04 PM

109285

~~PRELIMINARY ISSUE~~

Item ID: D4794-1 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Strut

Start Date: 11/18/13 **Start Qty:** 2.00 *2*

Required Date: 11/26/13 **Req'd Qty:** 2.00 *2*

Cust Item ID:

Customer:

Reference:

Approvals: **Process Plan:** [illegible] **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D2727	A1								
D4794	A								
110		0.00							
110	Small Fab								
Small Fab		0.00							
Small Fab	**Memo**								

1- Cut and punch end with tool by hand as per dwg and spec control dwg D2727

2- Grind the shape of ends of tube as per dwg and spec control dwg D2727

3- Drill hole as per dwg D4794

4- Remove identifying marks

5- Deburr

120	QC5- Inspect part completeness to step on W/O	0.00							
120									
QC	**Memo**	0.00							
Quality Control									

DAS 27 9-89

Rev B per EN 13.670

2 13-11-25

DAS 27 9-89 B/11/25

2 Inspect as per Dwg PBA

Work Order ID 109285

November-18-13 3:05:04 PM

109285

Item ID: D4794-1 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Strut

Start Date: 11/18/13 **Start Qty:** 2.00 *2*
Required Date: 11/26/13 **Req'd Qty:** 2.00 *2*
Reference:

Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** ____ **Date:** ____ **Tooling:** ____ **Date:** ____
QC: ____ **Date:** ____ **SPC (Y/N):** ____ **Date:** ____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: WA	0.00							
130									
Packaging	**Memo**	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	**Memo**	0.00							
Quality Control									

MF 13-12-04

13/12/4

DAS 27 9-89 13/12/04

Release DWG as per DWG Rev B MF 13-11-25

POSITIVE RECALL
EFFECTIVE 3/11/25 AUTH
RELEASED DATE 13/12/04 per ECN 13670

Picklist Print

November-18-13 3:05:03 PM

Work Order ID: 109285

Parent Item: D4794-1

Parent Item Name: Strut

Start Date: 11/18/13 **Required Date:** 11/26/13

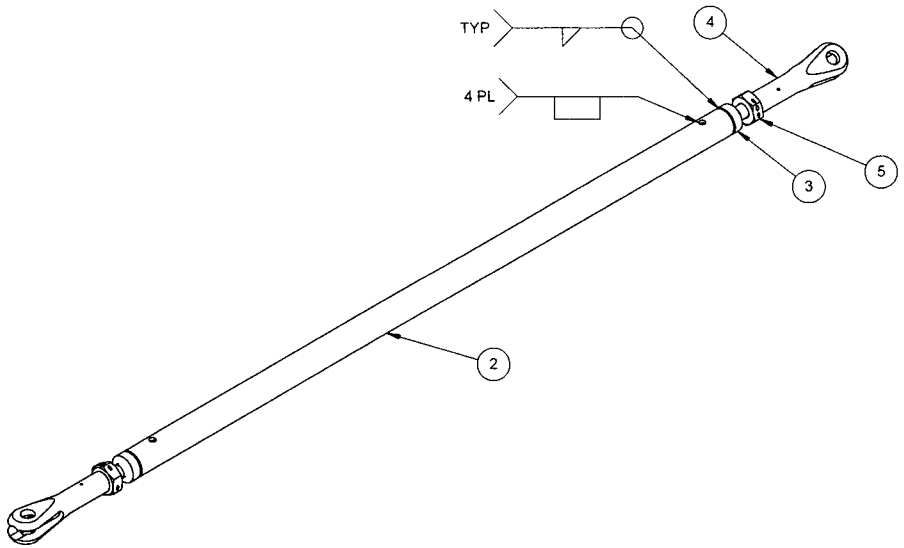
Start Qty: 2.00 **Required Qty:** 2.00

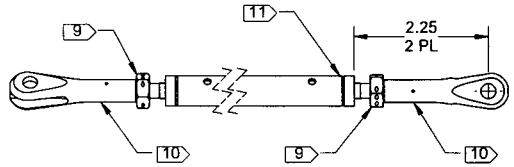
Comments: IPP REV:A 13.03.22 NEW ISSUE DD VERF:JLM IPP REV:B 13.06.21 DWG REV.A DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.500W.035 304 RD Tube .500 x .035W		Purchased	No			110	f	294.7058	**1.65**	**4**		FF 13-11-25	

Location	Loc Qty	Loc Code	
MAT017	294.7058225		
118702	0.00003		
123303	138.9645		
125513	86.1014525		4
m126922	69.63984		

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION
1	X	**D4794-041**	**STRUT ASSEMBLY**
2	1	D4794-1	STRUT
3	2	D4794-3	STUD
4	2	AN665-34R	THREADED CLEVIS
5	2	NAS509-4C	NUT, JAM (OR NAS509-4)





D4794-041 STRUT ASSEMBLY (B)

NOTES:
1) MATERIAL: NONE
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
7) WEIGHT: 0.50 lbs
8) WELD PER DART QSI 004
9) HAND TIE NAS509-4C NUT
10) USE TECTYL 502C CLASS I, MIL-PRF-16173E GRADE 2 OR EQUIVALENT ANTI-SEIZE COMPOUND ON THREAD
11) CHAMFER TUBING 0.030 x 45° PRIOR TO WELDING

w/o 109285

REV.	DESCRIPTION	BY	DATE
B	ADDED D4794-041/-3 (ZN B4-1, B5-3); REVISE D4794-1 (ZN B5-2); REMOVE D4794-2	RF	13.11.19
A	NEW ISSUE	RF	13.05.24

DESIGN	RF	**DART AEROSPACE LTD**	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	DC	DRAWING NO. D4794	REV. B2
MFG. APPR.			SHEET 1 OF 3
APPROVED		TITLE STRUT	SCALE NTS
DE APPR.			
DATE	13.11.19		

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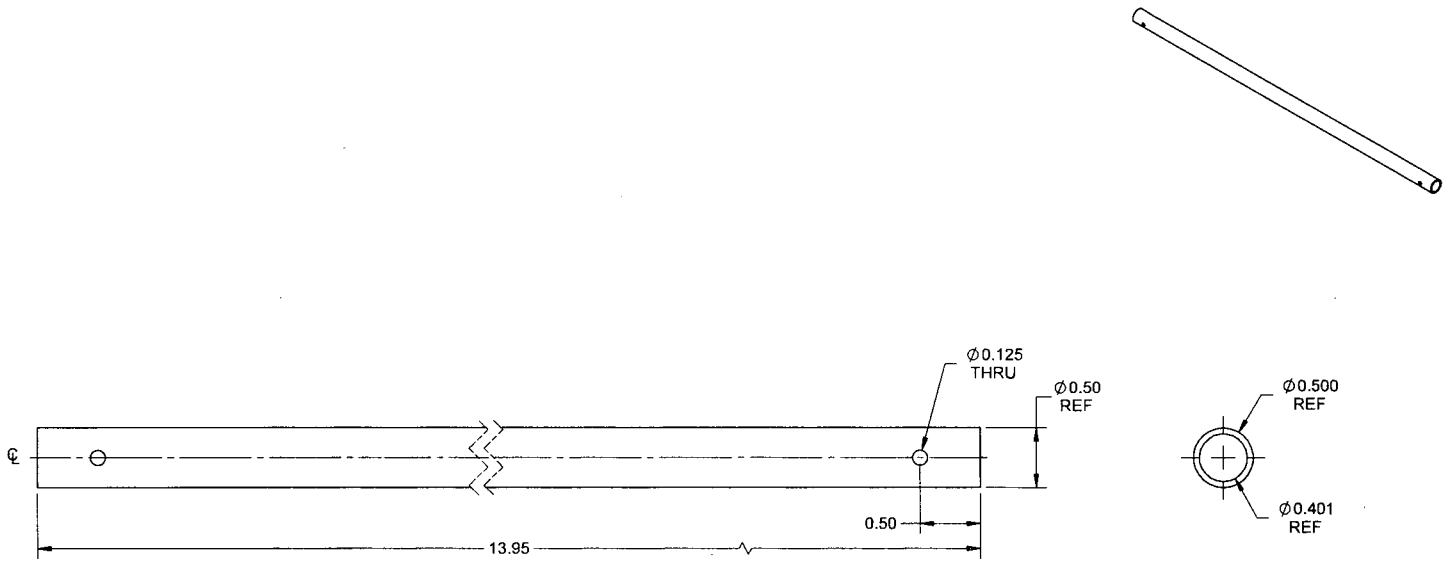

D4794-1 STRUT (B)

NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL SEAMLESS ROUND TUBING
PER ASTM A213 OR ASME SA213 OR ASTM S269
REF DART SPEC M304TR0.500W.049
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
7) WEIGHT: 0.28 lbs

DESIGN	RF	**DART AEROSPACE LTD**	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	DC	DRAWING NO. D4794	REV. B2
MFG. APPR.			SHEET 2 OF 3
APPROVED		TITLE STRUT	SCALE NTS
DE APPR.			
DATE 13.11.19			

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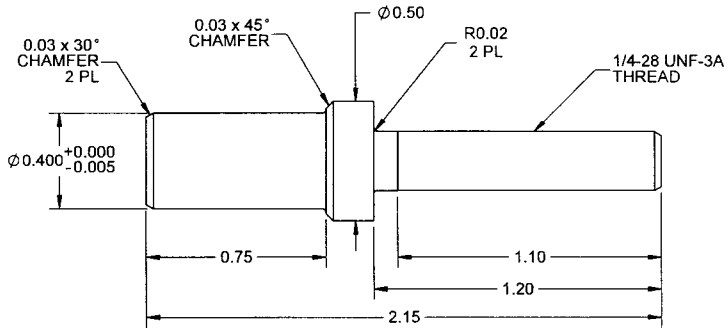

D4794-3 STUD (B)

NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
PER ASTM A276
REF DART SPEC M304R
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
7) WEIGHT: 0.05 lbs

DESIGN	RF
DRAWN	RF
CHECKED	DC
MFG. APPR.	
APPROVED	
DE APPR.	
DATE	13.11.19

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D4794 REV. B2
SHEET 3 OF 3
TITLE STRUT
SCALE NTS

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DART AEROSPACE LTD

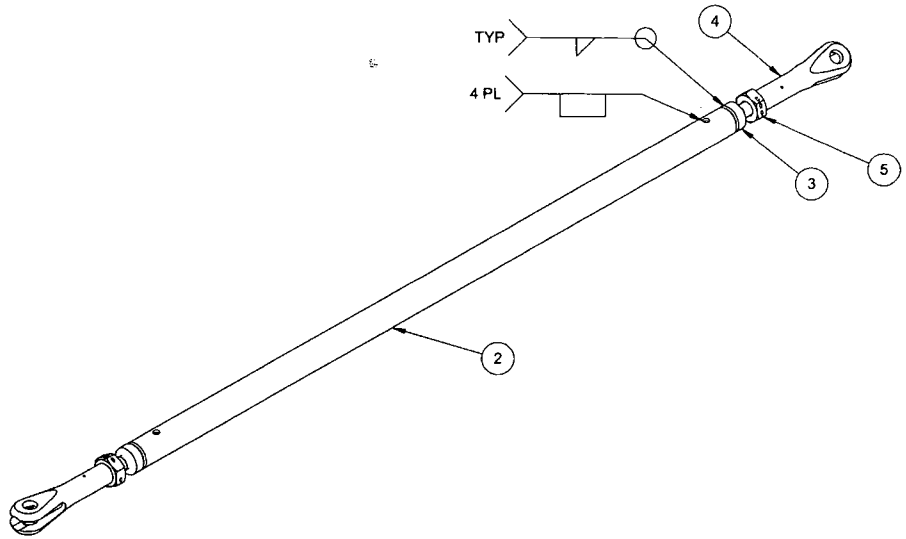
Description: STRut		**Work Order:** 109285	
Inspection Drawing: D4794	Rev: P1>2	Part Number:	D4794-1

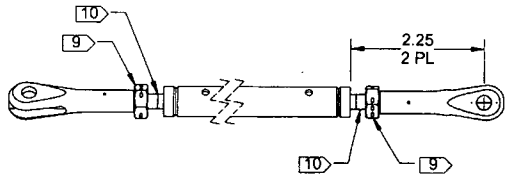
INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
13.95	.030	13.95	✓		TapeSFab07	
0.50	.030	0.50	✓		FIXN SFab14	
0.125 Ø		0.125	✓		FIXN "	
0.500	0.010	0.500	✓		FIXN "	
0.401	0.010	0.411	✓		FIXN "	

Measured by:	Checked By:	QC inspector:	Engineering Approval (*if necessary*):
FF	~~DAS~~ 30 9-89	DAS 27 9-89	
Date 13-11-25	Date 13/11/25	Date 13/11/25	Date

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION
1	X	D4794-041	STRUT ASSEMBLY
2	1	D4794-1	STRUT
3	2	D4794-3	STUD
4	2	AN665-34R	THREADED CLEVIS
5	2	NAS509-4C	NUT, JAM





D4794-041 STRUT ASSEMBLY B

RELEASED
2013-11-29

NOTES:
1) MATERIAL: NONE
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
7) WEIGHT: 0.50 lbs
8) WELD PER DART QSI 004
9) HAND TIGHTEN NAS509-4C NUT
10) USE TECTYL 502C CLASS I, MIL-PRF-16173E GRADE 2 OR EQUIVALENT ANTI-SEIZE COMPOUND ON THREAD

REV.	DESCRIPTION	BY	DATE
B	ADDED D4794-041/-3 (ZN B4-1, B5-3); REVISE D4794-1 (ZN B5-2); REMOVE D4794-2; REF NCR13-3184	RF	13.11.19
A	NEW ISSUE	RF	13.05.24

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DC	DRAWING NO. D4794	REV. B
MFG. APPR.			SHEET 1 OF 3
APPROVED		TITLE STRUT	SCALE NTS
DE APPR.			
DATE	13.11.19		

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

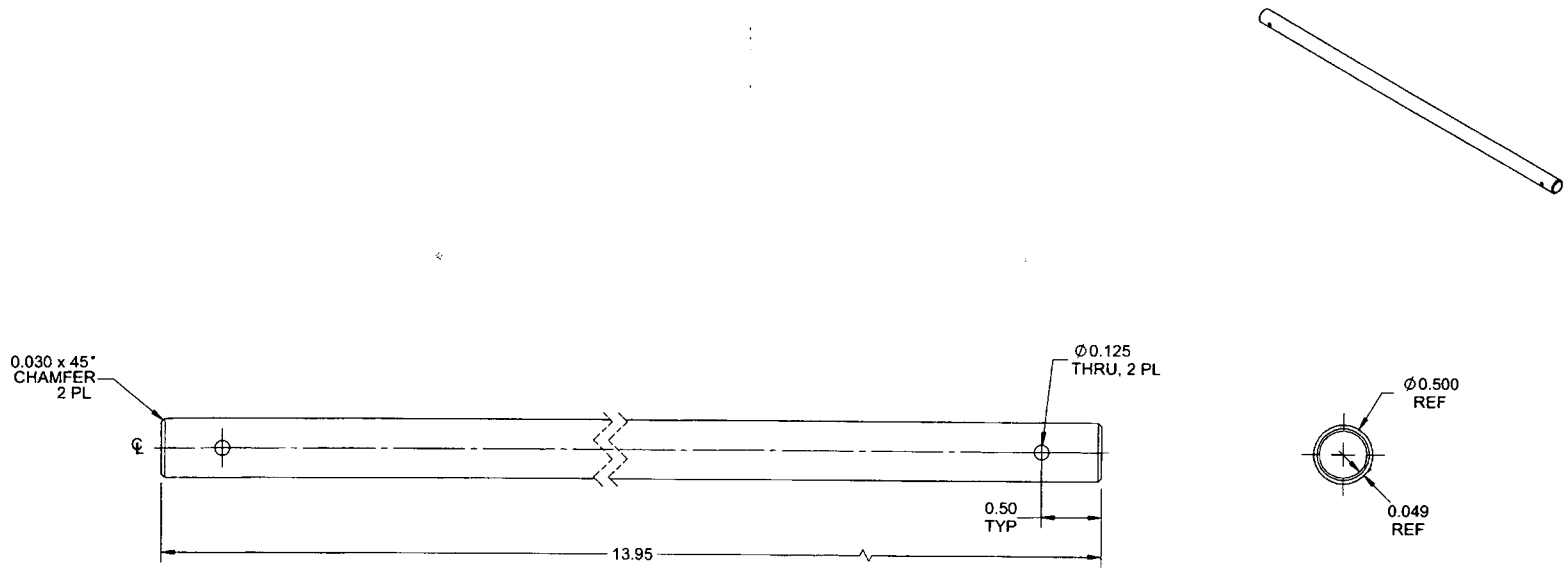
Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____



D4794-1 STRUT (B)

RELEASED
2013 -11- 29

NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL SEAMLESS ROUND TUBING
PER ASTM A213 OR ASME SA213 OR ASTM S269
REF DART SPEC M304TR0.500W.049
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.28 lbs

DESIGN	RF	**DART AEROSPACE LTD**
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED	DC	DRAWING NO. D4794 REV. B
MFG. APPR.		SHEET 2 OF 3
APPROVED		TITLE STRUT SCALE NTS
DE APPR.		
DATE	13.11.19	

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

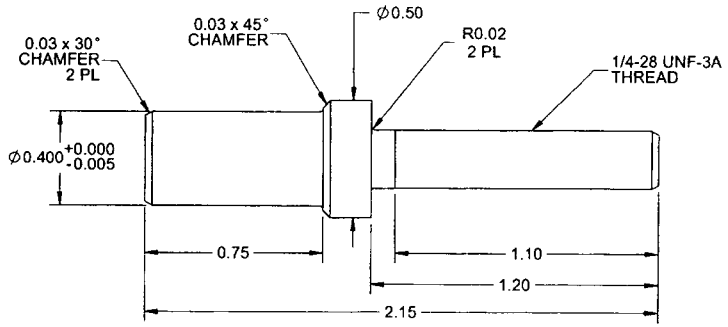
Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____



D4794-3 STUD (B)

RELEASED
DE 2013-11-29

NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
PER ASTM A276
REF DART SPEC M304R
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.05 lbs

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D4794 REV. B
CHECKED	DC	SHEET 3 OF 3
MFG. APPR.		TITLE STRUT SCALE NTS
APPROVED		
DE APPR.		
DATE	13.11.19	

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____